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EXAMINER

TRUONG, CAM Y T

ART UNIT	PAPER NUMBER
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2162

DATE MAILED: 11/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/691,066

Applicant(s)

TORMASOV ET AL.

Examiner

Cam Y T. Truong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12, 14-24 and 26-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 14-24 and 26-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant has amended claims 1, 14-20, 23-24, canceled 13, 25 and added claims 26-28 in the amendment filed on 11/17/2006.

Claims 1-12, 14-24, 26-28 are pending in this Office Action.

Response to Arguments

2. Applicant's arguments with respect to claims 1-12, 14-24, 26-28 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

3. Claims 1, 26 and 28 are objected to because of the following informalities: The limitation "accessible using the file system file system access mechanism" is recited in claim 1, line 15; claim 26, page 9, lines 5-6; claim 28, page 10, line 9. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-12, 14-24, 26-28 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably

convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claimed limitations "local users; wherein user's private file area stores a file accessible using the file system access mechanism but there are no paths for local user process to access, using file system access mechanism" are recited in claims 1, 14-18, 26-28" was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant support for these limitations may be found on page 8, lines 12 et seq., and in fig. 1. However, on this page and fig. 1 do not provide any information related to these claimed limitations.

Dependent claims are rejected under the same rational.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1, 26-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "at least one" is recited in claims 1, line 4-5; claim 26, lines 5-6; claim 28, line 5. This term is unclear whether one means user or one means process. Thus, this term is being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Dependent claims are rejected under the same rational.

The term "using a file system access mechanism" is recited in claims 1, 26 and 28. This term is unclear what kind of mechanism is used for accessing; thus this term is being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Dependent claims are rejected under the same rational.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-3, 5-7, 9-11, 14-15 19, 20, 22, and 24, 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burgoon (US 5706510) in view Huang (US 6571245).

As to claim 1, Burgoon teaches the claimed limitations:

"an operating system" as the operating system (col. 6, line 5);

"a file system locally mounted in the operation system" as (col. 6, lines 1-5, fig.

1);

"a plurality of local users, each user having at least one corresponding local user process" as (col. 35, lines 1-55);

"at least one of the plurality of local user processes running locally in the computer system under the control of the operation system" as (col. 6, lines 1- 5; col. 35, lines 1-55);

"at least one shareable file from the file system that is accessible using a file system access mechanism of the operating system by any of the plurality of the local user process" as after the shared file system 104 is constructed, a plurality of user file system 106-104 are provided with read-only access to the shared file system 104 (col. 4, lines 7-11),

"wherein each sharable file accessible using the file system mechanism is stored in a file storage memory location and is associated with a file path in the file system" as each sharable file of shared file system is stored in storage location and associated with a file path (fig. 3, co 5, lines 42-43);

"a sharable file tree comprising the file path of each sharable file accessible using the file system access mechanism" as shared file system comprise the file path of each sharable file such as File A4, File B2 (figs. 3&6);

"a user file tree associated with a user and the sharable file tree" as a user1 file system associated with a user1 and the shared file system. The user1 file system is represented as a user file tree (fig. 1, col. 4, lines 44-50);

"wherein the user file tree comprise at least one link inside the file system" as create a plurality of symbolic links under the directory hierarchies of the plurality of user file systems (fig. 2, col. 4, lines 23-27);

"wherein each link is associated with the file path of a referenced file accessible using the file system file system access mechanism, such that the user file tree is operable to point to the referenced file accessible using the file system mechanism in response to the local user process request to access a file" as each symbolic link is associated with a path of a file version 302-308 in shared file system such as that a user file system is provided with read-only access to the shared file system (col. 4, lines 7-27);

"a private file area associated with each local user" as a user's file storage space remains logically private" (col. 2, lines 23-26).

Burgoon does not explicitly teach the claimed limitation "wherein each local user's private file area stores a file accessible using the file system access mechanism but there are not paths for local user process to access, using file system access mechanism, the files from any other local user's private file area of the computer system".

Huang teaches private folder of a desktop user store files that are not available to other users of the computer system, each user desktop sees paths in his private folder, but files in any other user's private file are invisible. It means that each private folder only provide a path for owner's private folder to access and no other paths for other users to access the owner's private folder (col. 9, lines 45-50; col. 2, lines 23-45; col. 7, lines 57-67).

It would have been obvious to a person of an ordinary skill in the art at the time invention was made to apply Huang's teaching of private folder of a desktop user store

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files that are not available to other users of the computer system, each user desktop sees paths in his private folder, but files in any other user's private file are invisible to Burgoo's system in order to improve the security of user's information, protect user's information safety to avoid an unauthorized user try to access a user information for copying user's information without permission.

As to claim 2, Burgoo teaches the claimed limitation "wherein the user file tree is initially populated with links corresponding to the file path of a selected number of sharable files, such that the user file tree points to a selected shareable file in response to a request to access the selected sharable file but not to modify the sharable file" as (col. 22, lines 32-54).

As to claim 3, Burgoo teaches the claimed limitation "wherein the user file tree is initially populated with one or more links corresponding to the file paths to the shareable files" as (fig. 1, col. 22, lines 32-67).

As to claim 5, Burgoo teaches the claimed limitation "wherein the modification of the user file tree is transparent to the user" as (col. 24, lines 11-20).

As to claim 6, Burgoo teaches the claimed limitation "wherein at least one private file area is associated with a selected set of the plurality of users" as (fig. 1, col. 2, lines 20-26).

As to claim 7, Burgoo teaches the claimed limitation "wherein the selected set of the plurality of users is associated with the operating system" as (col. 5, lines 30-65).

As to claim 9, Burgoo teaches the claimed limitation "wherein the user file tree further comprise metadata" as metadata (col. 21, lines 50-55).

As to claim 10, Burgoo teaches the claimed limitation "wherein a link located in the user file tree further comprising the metadata" as (col. 21, lines 45-60).

As to claim 11, Burgoo teaches the claimed limitation "data associated with the user file tree" as (fig. 3).

As to claim 14, Burgoon teaches the claimed limitations:

"receiving a local user process to access a selected shareable file to perform an operation that does not involve a modification of the shareable file" as (col. 4, lines 64-67; col. 3, lines 32-40);

"pointing to the selected shareable file in response to the local user process" as (col. 27, lines 30-50).

As to claim 15, Burgoon teaches the claimed limitations:

"receiving a local user r to access a selected shareable file to perform an operation that involves a modification of the shareable file" as (col. 27, lines 30-50); .

"modifying the user file tree associated with the user such that the link associated with the selected shareable file point to the copy of the selected shareable file located in the private file area associated with the user" as (col. 27, lines 30-50);

As to claim 19, Burgoon teaches the claimed limitation "creating a private file area associated with a selected set of the plurality users" as (fig. 2; lines 23-26).

As to claim 20, Burgoon teaches the claimed limitation "creating a metadata associated with a selected one of the links associated with a shareable file in the sharable file tree (fig. 3).

As to claims 22 and 24, Burgoon does not explicitly teach the claimed limitation "wherein only one version of a sharable file is maintained by the file system".

Huang teaches the older file is updated with the newer file by saving the newer file owner the older file (col. 16, lines 55-65).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Huang's teaching of the older file is updated with the newer file by saving the newer file owner the older file to Burgoon's system in order to provide the newest version of a file to a user for viewing or updating.

As to claim 26, Burgoon teaches the claimed limitations:

"initializing an operating system" as the operating system (col. 6, line 5);

"mounting a file system locally in the operation system" as (col. 6, lines 1-5, fig. 1);

"instantiating a plurality of local users, each user having at least one corresponding local user process" as (col. 35, lines 1-55);

"at least one of the plurality of local user processes running locally in the computer system under the control of the operation system" as (col. 6, lines 1- 5; col. 35, lines 1-55);

"making at least one shareable file from the file system that is accessible using a file system access mechanism of the operating system by any of the plurality of the local user process" as after the shared file system 104 is constructed, a plurality of user file system 106-104 are provided with read-only access to the shared file system 104 (col. 4, lines 7-11),

"wherein each sharable file accessible using the file system mechanism is stored in a file storage memory location and is associated with a file path in the file system" as each sharable file of shared file system is stored in storage location and associated with a file path (fig. 3, co 5, lines 42-43);

"wherein a sharable file tree comprising the file path of each sharable file accessible using the file system access mechanism" as shared file system comprise the file path of each sharable file such as File A4, File B2 (figs. 3&6);

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"associating a user file tree with a user and the sharable file tree" as a user1 file system associated with a user1 and the shared file system. The user1 file system is represented as a user file tree (fig. 1, col. 4, lines 44-50);

"wherein the user file tree comprise at least one link inside the file system" as create a plurality of symbolic links under the directory hierarchies of the plurality of user file systems (fig. 2, col. 4, lines 23-27);

"wherein each link is associated with the file path of a referenced file accessible using the file system file system access mechanism, such that the user file tree is operable to point to the referenced file accessible using the file system mechanism in response to the local user process request to access a file" as each symbolic link is associated with a path of a file version 302-308 in shared file system such as that a user file system is provided with read-only access to the shared file system (col. 4, lines 7-27);

"associating a private file area associated with each local user" as a user's file storage space remains logically private" (col. 2, lines 23-26).

Burgoon does not explicitly teach the claimed limitation "wherein each local user's private file area stores a file accessible using the file system access mechanism but there are not paths for local user process to access, using file system access mechanism, the files from any other local user's private file area of the computer system".

Huang teaches private folder of a desktop user store files that are not available to other users of the computer system, each user desktop sees paths in his private folder,

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but files in any other user's private file are invisible. It means that each private folder only provide a path for owner's private folder to access and no other paths for other users to access the owner's private folder (col. 9, lines 45-50; col. 2, lines 23-45; col. 7, lines 57-67).

It would have been obvious to a person of an ordinary skill in the art at the time invention was made to apply Huang's teaching of private folder of a desktop user store files that are not available to other users of the computer system, each user desktop sees paths in his private folder, but files in any other user's private file are invisible to Burgoo's system in order to improve the security of user's information, protect user's information safety to avoid an unauthorized user try to access a user information for copying user's information without permission.

As to claim 27, Burgoo does not explicitly teach "wherein the operating system isolates the file system access for the local user processes to allow the local user processes any of the file path of the shareable file and the file path of a file from the private file area associated with the local user processes owned by that user".

Huang teaches private folder of a desktop user store files that are not available to other users of the computer system, each user desktop sees paths in his private folder, but files in any other user's private file are invisible. It means that each private folder only provides a path for owner's private folder to access or process and no other paths for other users to access the owner's private folder (col. 9, lines 45-50; col. 2, lines 23-45; col. 7, lines 57-67).

It would have been obvious to a person of an ordinary skill in the art at the time invention was made to apply Huang's teaching of private folder of a desktop user store files that are not available to other users of the computer system, each user desktop sees paths in his private folder, but files in any other user's private file are invisible to Burgoo's system in order to improve the security of user's information, protect user's information safety to avoid an unauthorized user try to access a user information for copying user's information without permission.

As to claim 28, Burgoon teaches the claimed limitations:

"an operating system" as the operating system (col. 6, line 5);

"a local file system locally accessible by the operating system" as (col. 6, lines 1-5, fig. 1);

"a plurality of local users, each user having a corresponding local user process" as (col. 6, lines 1-5; col. 35, lines 1-55);

"at least one of the local user processes running locally in the computer system under the control of the operating system" as (col. 6, lines 1-5; col. 35, lines 1-55);

"at least one shareable file from the file system that is accessible using a file system access mechanism of the operating system by the local user processes, wherein each shareable file is associated with a file path in the file system, and wherein the computer system maintains only one version of any sharable file" as (figs.5&6; col. 29, lines 45-50; col. 30, lines 20-55); ;

"a shareable file tree comprising the file path of each shareable file accessible using the file system access mechanism" as (figs. 1-3);

"a user file tree associated with a user and the sharable file tree" as a user1 file system associated with a user1 and the shared file system. The user1 file system is represented as a user file tree (fig. 1, col. 4, lines 44-50);

"wherein the user file tree comprise at least one link inside the file system" as create a plurality of symbolic links under the directory hierarchies of the plurality of user file systems (fig. 2, col. 4, lines 23-27);

"wherein each link is associated with the file path of a referenced file accessible using the file system file system access mechanism, such that the user file tree is operable to point to the referenced file accessible using the file system mechanism in response to the local user process request to access a file" as each symbolic link is associated with a path of a file version 302-308 in shared file system such as that a user file system is provided with read-only access to the shared file system (col. 4, lines 7-27);

"a private file area associated with each local user" as a user's file storage space remains logically private" (col. 2, lines 23-26).

Burgoon does not explicitly teach the claimed limitation "wherein each local user's private file area stores a file accessible using the file system access mechanism but there are not paths for local user process to access, using file system access mechanism, the files from any other local user's private file area of the computer system".

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Huang teaches private folder of a desktop user store files that are not available to other users of the computer system, each user desktop sees paths in his private folder, but files in any other user's private file are invisible. It means that each private folder only provide a path for owner's private folder to access and no other paths for other users to access the owner's private folder (col. 9, lines 45-50; col. 2, lines 23-45; col. 7, lines 57-67).

It would have been obvious to a person of an ordinary skill in the art at the time invention was made to apply Huang's teaching of private folder of a desktop user store files that are not available to other users of the computer system, each user desktop sees paths in his private folder, but files in any other user's private file are invisible to Burgoon's system in order to improve the security of user's information, protect user's information safety to avoid an unauthorized user try to access a user information for copying user's information without permission.

9. Claims 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burgoon in view of Huang and further in view of Poynor (US 6859812).

As to claim 4, Burgoon teaches claimed limitation "modify the user file tree associated with the user such that the link associated with the selected shareable file points to the copy of the selected shareable file instead of the selected shareable file in response to an attempt to modify the selected shareable file" as (fig. 7, col. 24, lines 11-20).

Burgoon does not explicitly teach the claimed limitation "wherein the operating system copies a selected shareable file to a private file area associated with one of the plurality of users".

Poynor teaches private area stores a copy of shareable file. It means that the copy of shareable file is copied in the private area for storing (col. 3, lines 39-50).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Poynor's teaching of storing a copy of shareable file in Burgoon's system in order to backup shareable files when system is corrupted and further to protect shareable files from modification without permission.

As to claim 8, Burgoon teaches the above claimed limitation subject matter in claim 1, except the claimed limitation "wherein the private file areas store files that do not comprise a link to either the user file tree or the shareable file tree".

Poynor teaches private file area does not comprise a link to a shared file area (fig. 2).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Poynor's teaching of private file area does not comprise a link to a shared file area to Burgoon's system in order to improve the security of user's information or private file area.

10. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Burgoon in view of Huang et al (or hereinafter "Huang") (US 6571245) and further in view of Gilmour (US 6647384).

As to claim 12, Burgoon teaches the above claimed limitation subject matter in claim 11, except the claimed limitation "wherein the metadata allows the user to define a permitted access to a selected shareable file without copying the selected shareable file into the private file area".

Gilmour teaches constructing a user profile that includes first and second portions that may conveniently be identified as private and public portions. Private portion means restrict access allowing others user to review details concerning a user knowledge profile (col. 17, lines 55-65).

It would have been obvious to a person of an ordinary skill in the art at the time invention was made to apply Gilmour's teaching of teaches constructing a user profile that includes first and second portions that may conveniently be identified as private and public portions. Private portion means restrict access allowing others user to review details concerning a user knowledge profile to Burgoon's system in order to improve the security of user's information, protect user's information safety to avoid an unauthorized user try to access for copying user's information without permission.

11. Claim 21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burgoon in view of Huang et al (or hereinafter "Huang") (US 6571245) and further in view of Ramaley et al (or hereinafter "Ramaley") (US 6687741).

As to claims 21 and 23, Burgoon does not explicitly teach the claimed limitation "the links are files".

Ramaley teaches shared files as links (col. 8, lines 5-10).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Ramaley's teaching of shared files as links to Burgoon's system in order to allow a user to access information on a server by using the file link via Internet quickly.

12. Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burgoon in view of Huang and further in view of Kawaguchi (US 5832527).

As to claim 16, Burgoon does not explicitly teach the claimed limitation "receiving a local user process to delete a selected shareable file; deleting the link located in the user file tree that is associated with the selected shareable file in response to the local user process the selected shareable file".

Kawaguchi teaches when a user requests to delete a file, the system deletes a file and the link of the file (col. 11, lines 65-67; col. 12, lines 1-5).

It would have been obvious to person of an ordinary skill in the art at the time the invention was made to apply Kawaguchi's teaching of when a user requests to delete a file, the system deletes a file and the link of the file to Burgoon's system in order to save

memory space and further to correctly maintain a relationship between file system free block data in the file system manager and allocation data in the file manger.

As to claim 17, Burgoon does not explicitly teach the claimed limitations "receiving a local user process to delete a selected private file stored in the private file area, wherein the selected private file is not associated with a link; deleting the selected private file in response to the local user process to delete the selected private file".

Kawaguchi teaches when a user requests to delete a file, the system deletes a file and the link of the file (col. 11, lines 65-67; col. 12, lines 1-5).

It would have been obvious to person of an ordinary skill in **the art** at the time the invention was made to apply Kawaguchi's teaching of when a user requests to delete a file, the system deletes a file and the link of the file to Burgoon's system in order to save memory space and further to correctly maintain a relationship between file system free block data in the file system manager and allocation data in the file manger.

As to claim 18, Burgoon teaches the claimed limitation "wherein the selected private file is associated with a link in the user file tree" as (fig. 1).

Burgoon does not explicitly teaches the claimed limitations "receiving a local user process to delete a selected private file stored in the private file area; deleting the selected private file in response to the local user process to delete the selected private file; and deleting the link associated with the selected private file in response the user request to delete the selected private file". Kawaguchi teaches when a user requests to

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delete a file, the system deletes a file and the link of the file (Col. 11, lines 65-67; Col. 12, lines 1-5).

It would have been obvious to person of an ordinary skill in the art at the time the invention was made to apply Kawaguchi's teaching. of when a user requests to delete a file, the system deletes a file and the link of the file to Burgoon's system in order to save memory space and further to correctly maintain a relationship between file system free block data in the file system manager and allocation data in the file manger.

13. Claims 1-3, 5-7, 9-11, 14-15, 19, 20, 22, and 24, 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burgoon in view Hendricks et al (or hereinafter "Hendricks") (US5313646).

As to claim 1, Burgoon teaches the claimed limitations:

"an operating system" as the operating system (col. 6, line 5);

"a file system locally mounted in the operation system" as (col. 6, lines 1-5, fig. 1);

"a plurality of local users, each user having at least one corresponding local user process" as (col. 35, lines 1-55);

"at least one of the plurality of local user processes running locally in the computer system under the control of the operation system" as (col. 6, lines 1- 5; col. 35, lines 1-55);

"at least one shareable file from the file system that is accessible using a file system access mechanism of the operating system by any of the plurality of the local

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user process" as after the shared file system 104 is constructed, a plurality of user file system 106-104 are provided with read-only access to the shared file system 104 (col. 4, lines 7-11),

"wherein each sharable file accessible using the file system mechanism is stored in a file storage memory location and is associated with a file path in the file system" as each sharable file of shared file system is stored in storage location and associated with a file path (fig. 3, co 5, lines 42-43);

"a sharable file tree comprising the file path of each sharable file accessible using the file system access mechanism" as shared file system comprise the file path of each sharable file such as File A4, File B2 (figs. 3&6);

"a user file tree associated with a user and the sharable file tree" as a user1 file system associated with a user1 and the shared file system. The user1 file system is represented as a user file tree (fig. 1, col. 4, lines 44-50);

"wherein the user file tree comprise at least one link inside the file system" as create a plurality of symbolic links under the directory hierarchies of the plurality of user file systems (fig. 2, col. 4, lines 23-27);

"wherein each link is associated with the file path of a referenced file accessible using the file system file system access mechanism, such that the user file tree is operable to point to the referenced file accessible using the file system mechanism in response to the local user process request to access a file" as each symbolic link is associated with a path of a file version 302-308 in shared file system such as that a user

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file system is provided with read-only access to the shared file system (col. 4, lines 7-27);

"a private file area associated with each local user" as a user's file storage space remains logically private" (col. 2, lines 23-26).

Burgoon does not explicitly teach the claimed limitation "wherein each local user's private file area stores a file accessible using the file system access mechanism but there are not paths for local user process to access, using file system access mechanism, the files from any other local user's private file area of the computer system".

Hendricks teaches having a hierarchical file structure, the file system is provided which permits users of the system to share a file hierarchy and also have a private hierarchy in which files are invisible to other users (abstract, col. 2, lines 30-45; col. 9, lines 1-10).

It would have been obvious to a person of an ordinary skill in the art at the time invention was made to apply the teaching of Hendricks of having a hierarchical file structure, the file system is provided which permits users of the system to share a file hierarchy and also have a private hierarchy in which files are invisible to other users to Burgoon's system in order to improve the security of user's information, protect user's information safety to avoid an unauthorized user try to access a user information for copying user's information without permission.

As to claim 2, Burgoon teaches the claimed limitation "wherein the user file tree is initially populated with links corresponding to the file path of a selected number of sharable files, such that the user file tree points to a selected shareable file in response to a request to access the selected sharable file but not to modify the sharable file" as (col. 22, lines 32-54).

As to claim 3, Burgoon teaches the claimed limitation "wherein the user file tree is initially populated with one or more links corresponding to the file paths to the shareable files" as (fig. 1, col. 22, lines 32-67).

As to claim 5, Burgoon teaches the claimed limitation "wherein the modification of the user file tree is transparent to the user" as (col. 24, lines 11-20).

As to claim 6, Burgoon teaches the claimed limitation "wherein at least one private file area is associated with a selected set of the plurality of users" as (fig. 1, col. 2, lines 20-26).

As to claim 7, Burgoon teaches the claimed limitation "wherein the selected set of the plurality of users is associated with the operating system" as (col. 5, lines 30-65).

As to claim 9, Burgoon teaches the claimed limitation "wherein the user file tree further comprise metadata" as metadata (col. 21, lines 50-55).

As to claim 10, Burgoon teaches the claimed limitation "wherein a link located in the user file tree further comprising the metadata" as (col. 21, lines 45-60).

As to claim 11, Burgoon teaches the claimed limitation "data associated with the user file tree" as (fig. 3).

As to claim 14, Burgoon teaches the claimed limitations:

"receiving a local user process to access a selected shareable file to perform an operation that does not involve a modification of the shareable file" as (col. 4, lines 64-67; col. 3, lines 32-40);

"pointing to the selected shareable file in response to the user request" as (col. 27, lines 30-50).

As to claim 15, Burgoon teaches the claimed limitations:

"receiving a local user process to access a selected shareable file to perform an operation that involves a modification of the shareable file" as (col. 27, lines 30-50); .

"modifying the user file tree associated with the user such that the link associated with the selected shareable file point to the copy of the selected shareable file located in the private file area associated with the user" as (col. 27, lines 30-50);

As to claim 19, Burgoon teaches the claimed limitation "creating a private file area associated with a selected set of the plurality users" as (fig. 2, lines 23-26).

As to claim 20, Burgoon teaches the claimed limitation "creating a metadata associated with a selected one of the links associated with a shareable file in the sharable file tree (fig. 3).

As to claims 22 and 24, Burgoon does not explicitly teach the claimed limitation "wherein only one version of a sharable file is maintained by the file system".

Hendricks teaches modifying versions of files (col. 6, lines 5-35).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to Hendrick's teaching of modifying versions of files to Burgoon's system in order to provide the newest version of a file to a user for viewing or updating.

As to claim 26, Burgoon teaches the claimed limitations:

"initializing an operating system" as the operating system (col. 6, line 5);

"mounting a file system locally in the operation system" as (col. 6, lines 1-5, fig. 1);

"instantiating a plurality of local users, each user having at least one corresponding local user process" as (col. 35, lines 1-55);

"at least one of the plurality of local user processes running locally in the computer system under the control of the operation system" as (col. 6, lines 1- 5; col. 35, lines 1-55);

"making at least one shareable file from the file system that is accessible using a file system access mechanism of the operating system by any of the plurality of the local user process" as after the shared file system 104 is constructed, a plurality of user file system 106-104 are provided with read-only access to the shared file system 104 (col. 4, lines 7-11),

"wherein each sharable file accessible using the file system mechanism is stored in a file storage memory location and is associated with a file path in the file system" as each sharable file of shared file system is stored in storage location and associated with a file path (fig. 3, co 5, lines 42-43);

"wherein a sharable file tree comprising the file path of each sharable file accessible using the file system access mechanism" as shared file system comprise the file path of each sharable file such as File A4, File B2 (figs. 3&6);

" associating a user file tree with a user and the sharable file tree" as a user1 file system associated with a user1 and the shared file system. The user1 file system is represented as a user file tree (fig. 1, col. 4, lines 44-50);

"wherein the user file tree comprise at least one link inside the file system" as create a plurality of symbolic links under the directory hierarchies of the plurality of user file systems (fig. 2, col. 4, lines 23-27);

"wherein each link is associated with the file path of a referenced file accessible using the file system file system access mechanism, such that the user file tree is operable to point to the referenced file accessible using the file system access mechanism in response to the local user process request to access a file" as each symbolic link is associated with a path of a file version 302-308 in shared file system such as that a user file system is provided with read-only access to the shared file system (col. 4, lines 7-27);

"associating a private file area with each local user" as a user's file storage space remains logically private" (col. 2, lines 23-26).

Burgoon does not explicitly teach the claimed limitation "wherein each local user's private file area stores a file accessible using the file system access mechanism but there are not paths for local user process to access, using file system access mechanism, the files from any other local user's private file area of the computer system".

Hendricks teaches having a hierarchical file structure, the file system is provided which permits users of the system to share a file hierarchy and also have a private hierarchy in which files are invisible to other users (abstract, col. 2, lines 30-45; col. 9, lines 1-10).

It would have been obvious to a person of an ordinary skill in the art at the time invention was made to apply the teaching of Hendricks of having a hierarchical file structure, the file system is provided which permits users of the system to share a file hierarchy and also have a private hierarchy in which files are invisible to other users to

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Burgoo's system in order to improve the security of user's information, protect user's information safety to avoid an unauthorized user try to access a user information for copying user's information without permission.

As to claim 27, Burgoo does not explicitly teach "wherein the operating system isolates the file system access for the local user processes to allow the local user processes any of the file path of the shareable file and the file path of a file from the private file area associated with the local user processes owned by that user".

Hendricks teaches having a hierarchical file structure, the file system is provided which permits users of the system to share a file hierarchy and also have a private hierarchy in which files are invisible to other users. The above information means that the file system is limited for other users' requests (abstract, col. 2, lines 30-45; col. 9, lines 1-10).

It would have been obvious to a person of an ordinary skill in the art at the time invention was made to apply the teaching of Hendricks of having a hierarchical file structure, the file system is provided which permits users of the system to share a file hierarchy and also have a private hierarchy in which files are invisible to other users to Burgoo's system in order to improve the security of user's information, protect user's information safety to avoid an unauthorized user try to access a user information for copying user's information without permission.

As to claim 28, Burgoon teaches the claimed limitations:

"an operating system" as the operating system (col. 6, line 5);

"a local file system locally accessible by the operating system" as (col. 6, lines 1-5, fig. 1);

"a plurality of local users, each user having a corresponding local user process" as (col. 6, lines 1-5; col. 35, lines 1-55);

"at least one of the local user processes running locally in the computer system under the control of the operating system" as (col. 6, lines 1-5; col. 35, lines 1-55);

"at least one shareable file from the file system that is accessible using a file system access mechanism of the operating system by the local user processes, wherein each shareable file is associated with a file path in the file system, and wherein the computer system maintains only one version of any sharable file" as (figs. 5&6; col. 29, lines 45-50; col. 30, lines 20-55); ;

"a shareable file tree comprising the file path of each shareable file accessible using the file system access mechanism" as (figs. 1-3);

"a user file tree associated with a user and the sharable file tree" as a user1 file system associated with a user1 and the shared file system. The user1 file system is represented as a user file tree (fig. 1, col. 4, lines 44-50);

"wherein the user file tree comprise at least one link inside the file system" as create a plurality of symbolic links under the directory hierarchies of the plurality of user file systems (fig. 2, col. 4, lines 23-27);

"wherein each link is associated with the file path of a referenced file accessible using the file system file system access mechanism, such that the user file tree is

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operable to point to the referenced file accessible using the file system mechanism in response to the local user process request to access a file" as each symbolic link is associated with a path of a file version 302-308 in shared file system such as that a user file system is provided with read-only access to the shared file system (col. 4, lines 7-27);

"a private file area associated with each local user" as a user's file storage space remains logically private" (col. 2, lines 23-26).

Burgoon does not explicitly teach the claimed limitation "wherein each local user's private file area stores a file accessible using the file system access mechanism but there are not paths for local user process to access, using file system access mechanism, the files from any other local user's private file area of the computer system".

Hendricks teaches having a hierarchical file structure, the file system is provided which permits users of the system to share a file hierarchy and also have a private hierarchy in which files are invisible to other users (abstract, col. 2, lines 30-45; col. 9, lines 1-10).

It would have been obvious to a person of an ordinary skill in the art at the time invention was made to apply the teaching of Hendricks of having a hierarchical file structure, the file system is provided which permits users of the system to share a file hierarchy and also have a private hierarchy in which files are invisible to other users to Burgoon's system in order to improve the security of user's information, protect user's

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information safety to avoid an unauthorized user try to access a user information for copying user's information without permission.

14. Claims 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burgoon in view of Hendricks and further in view of Poynor (US 6859812).

As to claim 4, Burgoon teaches claimed limitation "modify the user file tree associated with the user such that the link associated with the selected shareable file points to the copy of the selected shareable file instead of the selected shareable file in response to an attempt to modify the selected shareable file" as (fig. 7, col. 24, lines 11-20).

Burgoon does not explicitly teach the claimed limitation "wherein the operating system copies a selected shareable file to a private file area associated with one of the plurality of users".

Poynor teaches private area stores a copy of shareable file. It means that the copy of shareable file is copied in the private area for storing (col. 3, lines 39-50).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Poynor's teaching of storing a copy of shareable file in Burgoon's system in order to backup shareable files when system is corrupted and further to protect shareable files from modification without permission.

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As to claim 8, Burgoo teaches the above claimed limitation subject matter in claim 1, except the claimed limitation "wherein the private file areas store files that do not comprise a link to either the user file tree or the shareable file tree".

Poynor teaches private file area does not comprise a link to a shared file area (fig. 2).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Poynor's teaching of private file area does not comprise a link to a shared file area to Burgoo's system in order to improve the security of user's information or private file area.

15. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Burgoon in view of Hendricks and further in view of Gilmour (US 6647384).

As to claim 12, Burgoo teaches the above claimed limitation subject matter in claim 11, except the claimed limitation "wherein the metadata allows the user to define a permitted access to a selected shareable file without copying the selected shareable file into the private file area".

Gilmour teaches constructing a user profile that includes first and second portions that may conveniently be identified as private and public portions. Private portion means restrict access allowing others user to review details concerning a user knowledge profile (col. 17, lines 55-65).

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It would have been obvious to a person of an ordinary skill in the art at the time invention was made to apply Gilmour's teaching of teaches constructing a user profile that includes first and second portions that may conveniently be identified as private and public portions. Private portion means restrict access allowing others user to review details concerning a user knowledge profile to Burgoo's system in order to improve the security of user's information, protect user's information safety to avoid an unauthorized user try to access for copying user's information without permission.

16. Claim 21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burgoon in view of Hendricks and further in view of Ramaley et al (or hereinafter "Ramaley") (US 6687741).

As to claims 21 and 23, Burgoon does not explicitly teach the claimed limitation "the links are files".

Ramaley teaches shared files as links (col. 8, lines 5-10).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Ramaley's teaching of shared files as links to Burgoon's system in order to allow a user to access information on a server by using the file link via Internet quickly.

17. Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burgoon in view of Hendricks and further in view of Kawaguchi (US 5832527).

As to claim 16, Burgoon does not explicitly teach the claimed limitation "receiving a local user process to delete a selected shareable file; deleting the link located in the user file tree that is associated with the selected shareable file in response to the user request the selected shareable file".

Kawaguchi teaches when a user requests to delete a file, the system deletes a file and the link of the file (col. 11, lines 65-67; col. 12, lines 1-5).

It would have been obvious to person of an ordinary skill in the art at the time the invention was made to apply Kawaguchi's teaching of when a user requests to delete a file, the system deletes a file and the link of the file to Burgoon's system in order to save memory space and further to correctly maintain a relationship between file system free block data in the file system manager and allocation data in the file manger.

As to claim 17, Burgoon does not explicitly teach the claimed limitations "receiving a local user process to delete a selected private file stored in the private file area, wherein the selected private file is not associated with a link; deleting the selected private file in response to the user request to delete the selected private file".

Kawaguchi teaches when a user requests to delete a file, the system deletes a file and the link of the file (col. 11, lines 65-67; col. 12, lines 1-5).

It would have been obvious to person of an ordinary skill in **the art** at the time the invention was made to apply Kawaguchi's teaching of when a user requests to delete a file, the system deletes a file and the link of the file to Burgoon's system in order to save

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memory space and further to correctly maintain a relationship between file system free block data in the file system manager and allocation data in the file manger.

As to claim 18, Burgoon teaches the claimed limitation "wherein the selected private file is associated with a link in the user file tree" as (fig. 1).

Burgoon does not explicitly teaches the claimed limitations "receiving a local user process to delete a selected private file stored in the private file area; deleting the selected private file in response to the user request to delete the selected private file; and deleting the link associated with the selected private file in response the user request to delete the selected private file". Kawaguchi teaches when a user requests to delete a file, the system deletes a file and the link of the file (Col. 11, lines 65-67; Col. 12, lines 1-5).

It would have been obvious to person of an ordinary skill in the art at the time the invention was made to apply Kawaguchi's teaching. of when a user requests to delete a file, the system deletes a file and the link of the file to Burgoon's system in order to save memory space and further to correctly maintain a relationship between file system free block data in the file system manager and allocation data in the file manger.

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


Dutcher (US 6044465).

Contact Information

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cam Y T. Truong whose telephone number is (571) 272-4042. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Art Unit 2162
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